

AMENDMENTS TO THE SPECIFICATION:

Please amend the paragraph beginning at page 2, line 2, as follows:

Field of the Invention

Please amend the paragraph beginning at page 2, line 7, as follows:

Description of the Prior Art

Please amend the paragraph beginning at page 9, line 18, as follows:

Figure 1 shows a first example instruction pipeline 30 of a type suitable for use in an ARM processor based system. The instruction pipeline 30 includes a fetch stage 32, a native instruction (ARM/Thumb instructions) decode stage 34, an execute stage 36, a memory access stage 38 and a write back stage 40. The execute stage 36, the memory access stage 38 and the write back stage 40 are substantially conventional. Downstream of the fetch stage 32, and upstream of the native instruction decode stage 34, there is provided an instruction translator stage 42. The instruction translator stage 42 is a finite state machine that translates Java bytecode instructions of a variable length into native ARM instructions. The instruction translator stage 42 is capable of multi-step operation whereby a single Java bytecode instruction may generate a sequence of ARM instructions that are fed along the remainder of the instruction pipeline 30 to perform the operation specified by the Java bytecode instruction. Simple Java bytecode instructions may ~~required~~ require only a single ARM instruction to perform their operation, whereas more complicated Java bytecode instructions, or in circumstances where the surrounding system state so dictates, several ARM instructions may be needed to provide the

NEVILL

Appl. No. 09/887,561

April 7, 2004

operation specified by the Java bytecode instruction. This multi-step operation takes place downstream of the fetch stage 32 and accordingly power is not expended upon fetching multiple translated ARM instructions or Java bytecodes from a memory system.

B¹ The Java bytecode instructions are stored within the memory system in a conventional manner such that additional constraints are not provided upon the memory system in order to support the Java bytecode translation operation.
